

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

**Ronald L. Smith**

Serial No.: **08/568,777**

Filed: **12/07/1995**

For: **PORTABLE COMPUTER HAVING AN INTERFACE FOR DIRECT  
CONNECTION TO A MOBILE TELEPHONE**

Docket No.: **TI-22187**

Art Unit: **2112**

Examiner: **Myers, Paul R.**

Conf. No.: **7439**

**SUBSTITUTE APPELLANTS' BRIEF – 37 C.F.R. § 1.192(c)**

Commissioner for Patents

Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is submitted in connection with the above-identified application in response to the final Office Action mailed May 25, 2006.

**I. REAL PARTY IN INTEREST**

Texas Instruments Incorporated is the real party in interest.

## **II. RELATED APPEALS AND INTERFERENCES**

Appellants are aware of a previous appeal to the Board of Patent Appeals regarding the present application. A Decision on Appeal was rendered by the Board in Appeal No. 1999-2042 on March 8, 2002. The Decision Affirmed-in-Part and Reversed-in-Part respective ones of Examiner's rejections using references "Hop U.S. 4,912,756; Morris U.S. 5,020,090; and Dent et al. U.S. 5,581,597. Appellants are not sure what, if any, relevance the previous appeal has to the present appeal.

## **III. STATUS OF CLAIMS**

Claims 20, 21 and 24-27 are allowed. Claims 15-19, 22-23, 28, 30-46 are pending in the application. Rejection of Claims 15-19, 22-23, 28, and 30-46 was made by the Examiner in the Office Action dated May 25, 2006. Claims 15-19, 22-23, 28, and 30-46 are on appeal. Claims 15-19, 22-23, 28, and 30-46 are reproduced in the Appendix to Appellants' Brief filed herewith.

## **IV. STATUS OF AMENDMENTS**

An Amendment 37 CFR § 1.116 mailed by Appellants on December 6, 2005. The Office Action was entered and an Office Action was mailed by the USPTO on May 25, 2006. This appeal is from the Office Action dated May 25, 2006.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

The invention comprises a portable computer having an interface for direct connection to a portable telephone. In one embodiment of the invention, a portable telephone (cellular in the present case) is constructed in such a fashion as to fit within a cavity in a portable computer (such as a cavity that otherwise accepts a battery pack like the front loading battery pack for the Texas Instruments TM-5000 portable computer - or other device when not utilized as a portable telephone port). The portable telephone is physically connected to the portable computer by a latching mechanism and communicates with the portable computer by means of a computer/portable telephone interface (in this embodiment of the invention, an in line connector that electrically connects the portable telephone to the portable computer). Physically and electrically connecting the portable telephone to the portable computer eliminates the need for a cable or tethered connection between a portable computer and a portable telephone, as illustrated in FIG. 7.

In one embodiment of the invention, the portable telephone serves as the portable computer's modem and function while installed in the computer. Thus, the portable phone facilitates the transmission and reception of data between the portable computer and another computer connected to the telephone system. In another embodiment of the invention, the portable computer (and not the portable telephone), contains the modem that is utilized for telephonic data communications. In yet another embodiment of the invention, a modem may be omitted altogether when telephone 188 is to be used in a completely digital telephone network. An operator of the portable computer/portable telephone also has the option of using the portable telephone for voice transmission independently of the computer, or may enjoy hands free voice operation by using the portable computer's internal speaker and microphone. Still another embodiment of the invention facilitates portable telephone operation on the computers internal battery/power system while installed in the portable computer and on it's own battery (charged while in the portable computer) when used independently of the portable computer.

More specifically, independent Claim 15 requires and positively recites a computer (164; FIG. 14; page 24, line 13), comprising:

a provision for user input (KEYBOARD WITH POINT; FIG. 14; page 25, lines 4-8; see also PS/2 KEY/MOUSE CONNECTOR, MIC ... JACKS, etc);

a provision for output (640 BY 480 VGA LCD; FIG. 14; page 25, lines 1-3; see also SPEAKER AND AUDIO JACKS; RS-232 CONNECTOR; PRINTER CONNECTOR, PCMCIA CARD SLOTS, etc);

a microprocessor coupled to said user input and said output (PENTIUM 75 MHZ; FIG 14; page 24, lines 13-24); and

an interface (182; FIG. 14; page 25, line 26, etc) coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection (page 19, lines 1-6) to a corresponding interface (172; FIG. 13; page 25, lines 25-27, etc) in a portable telephone (168; FIG. 13) having a battery (174; FIG. 13; page 23, lines 11-13) coupled thereto, wherein said interface comprises at least one voice channel lead (VOICE; FIG. 16; page 25, lines 21-27, etc), one command channel lead (COMMAND CHANNEL; FIG. 16; page 25, lines 21-27, etc) and a ground/reference lead (GND; FIG. 16; page 25, lines 21-27, etc) for connection to corresponding leads in a corresponding interface in said portable telephone.

Independent Claim 30 requires and positively recites a portable telephone (166; FIG. 13; page 20, lines 5-16), comprising:

an input (178; FIG. 13; page 23, lines 20-21);

an output (180; FIG. 13; page 23, line 21);

a microprocessor (58; FIG. 13; page 21, lines 7-14) coupled to said input and said output; and

an interface (172; FIG. 13; page 21, lines 10-11; page 24, lines 8-12) coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection (page 19, lines 1-6) to a corresponding interface in another portable telephone, wherein said interface comprises at least one voice channel lead (VOICE; FIG. 15; page 25,

*line 23, etc)*, one command channel lead (*COMMAND CHANNEL; FIG. 15; page 25, line 24, etc*) and a ground/reference lead (*GND; FIG. 15; page 25, lines 25-26, etc*) for connection to corresponding leads in a corresponding interface in said another portable telephone.

Independent Claim 38 requires and positively recites a method, comprising the steps of:

providing an input (*KEYBOARD WITH POINT; FIG. 14; page 25, lines 4-8; see also PS/2 KEY/MOUSE CONNECTOR, MIC ... JACKS; HARD DISK DRIVE; FLOPPY DISK DRIVE; PCMCIA CARD SLOTS, etc*);

providing an output (*640 BY 480 VGA LCD; FIG. 14; page 25, lines 1-3; see also SPEAKER AND AUDIO JACKS; RS-232 CONNECTOR; PRINTER CONNECTOR, PCMCIA CARD SLOTS, etc*);

coupling a microprocessor to said input and said output (*PENTIUM 75 MHz; FIG 14; page 24, lines 13-24*); and

coupling an interface (*182; FIG. 14; page 25, line 26, etc*) to said microprocessor, said interface being directly connectable without a cable or tethered connection (*page 19, lines 1-6*) to a corresponding interface (*172; FIG. 13; page 25, lines 25-27, etc*) in a portable telephone (*168; FIG. 13*) having a battery (*174; FIG. 13; page 23, lines 11-13*) coupled thereto, wherein said interface comprises at least one voice channel lead (*VOICE; FIG. 16; page 25, lines 21-27, etc*), one command channel lead (*COMMAND CHANNEL; FIG. 16; page 25, lines 21-27, etc*) and a ground/reference lead (*GND; FIG. 16; page 25, lines 21-27, etc*) for connection to corresponding leads in a corresponding interface in said another apparatus.

Independent Claim 43 requires and positively recites a computer (*164; FIG. 14; page 24, line 13*), comprising:

a provision for user input (*KEYBOARD WITH POINT; FIG. 14; page 25, lines 4-8; see also PS/2 KEY/MOUSE CONNECTOR, MIC ... JACKS, etc*);

a provision for output (640 BY 480 VGA LCD; FIG. 14; page 25, lines 1-3; see also SPEAKER AND AUDIO JACKS; RS-232 CONNECTOR; PRINTER CONNECTOR, PCMCIA CARD SLOTS, etc);

a microprocessor coupled to said user input and said output (PENTIUM 75 MHz; FIG 14; page 24, lines 13-24); and

an interface (182; FIG. 14; page 25, line 26, etc) coupled to said microprocessor, said interface being located within a cavity (210; FIG 11; page 19, line 24 – page 20, line 4) in said computer and directly connectable without a cable or tethered connection (page 19, lines 1-6) to a corresponding interface (172; FIG. 13; page 25, lines 25-27, etc) in a portable telephone (168; FIG. 13) having a battery (174; FIG. 13; page 23, lines 11-13) coupled thereto, wherein said interface comprises at least one voice channel lead (VOICE; FIG; 16; page 25, lines 21-27, etc), one command channel lead (COMMAND CHANNEL; FIG. 16; page 25, lines 21-27, etc) and a ground/reference lead (GND; FIG. 16; page 25, lines 21-27, etc) for connection to corresponding leads in a corresponding interface in said portable telephone.

Independent Claim 46 requires and positively recites a computer (164; FIG. 14; page 24, line 13), comprising:

a provision for user input (KEYBOARD WITH POINT; FIG. 14; page 25, lines 4-8; see also PS/2 KEY/MOUSE CONNECTOR, MIC ... JACKS, etc);

a provision for output (640 BY 480 VGA LCD; FIG. 14; page 25, lines 1-3; see also SPEAKER AND AUDIO JACKS; RS-232 CONNECTOR; PRINTER CONNECTOR, PCMCIA CARD SLOTS, etc);

a microprocessor coupled to said user input and said output (PENTIUM 75 MHz; FIG 14; page 24, lines 13-24);

an interface (182; FIG. 14; page 25, line 26, etc) coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection (page 19, lines 1-6; page 53, lines 9-22) to a corresponding interface (172; FIG. 13; page 25, lines

25-27, etc) in a portable telephone (168; FIG. 13) having a battery (174; FIG. 13; page 23, lines 11-13) coupled thereto; and

a mechanism on said computer (page 53, lines 20-24) that cooperates with a corresponding mechanism on said portable telephone (FIG. 11; page 19, line 1) for removably securing said portable telephone to said computer.

## **VI. GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

1) Are Claims 15, 17, 19, 22-23, 28, 30-44 and 46 patentable under 35 U.S.C. 103(a) over Sinton U.S. 5,249,218 in view of Morris U.S. 5,020,090?

2) Is Claim 16 patentable under 35 U.S.C. 103(a) over Sinton U.S. 5,249,218 in view of Morris U.S. 5,020,090 as applied to claim 15 and further in view of Kyu et al U.S. 4,225,919?

3) Is Claim 18 patentable under 35 U.S.C. 103(a) over Sinton U.S. 5,249,218 in view of Morris U.S. 5,020,090 as applied to claim 15 above and further in view of Dent et al U.S. 5,81,597?

4) Is Claim 45 patentable under 35 U.S.C. 103(a) over Sinton U.S. 5,249,218 in view of Morris U.S. 5,020,090 as applied to claim 43 above and further in view of Kobayashi U.S. 5,111,361?

## **VII. ARGUMENTS**

1) 35 U.S.C. § 103(a) rejection over Sinton in view of Morris.

Claims 15, 17, 19, 22-23, 28, 30-44 and 46 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton PN 5,249,218 in view of Morris PN 5,020,090. Appellants respectfully traverse this rejection as set forth below.

Prior to addressing the technical aspects of the above rejection, Appellants respectfully traverse the Examiner's erroneous determination that "one cannot show nonobviousness by attacking references individually where the rejections are based on combination of references" (Office Action dated May 25, 2006, page 2, lines 7-11).

Appellants respectfully point out Sainton individually and Morris individually are the prior art – NOT the COMBINATION of Sainton and Morris as suggested by the Examiner. Appellants respectfully point out that they are entitled to analyze the references individually first, and then in combination to determine what is the prior art.

In Graham v. John Deere Co., 148 USPQ 459 (U.S. Sup. Ct. 1966), the U.S. Supreme Court clearly and explicitly compared Scoggin's invention first to the Lohse patent individually, thereafter to the Mellon patent individually, and thereafter to the Livingstone patent individually. 148 USPQ 459, 472. **Such an individual assessment of the prior art references is considered well-settled law** in view of the fact that the obviousness statute, 35 USC 103, "refers to the difference between the subject matter sought to be patented and the prior art, meaning what was known before as described in section 102". Graham, 148 USPQ 459, 465-466 (quoting the Senate and House Reports, S. Rep. No. 1979, 82<sup>nd</sup> Cong., 2d Sess. (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess. (1952)). Thus, Graham requires that each reference be assessed individually to ascertain how it differs from the claims. This should be clear by realizing that 35 USC 103 has as its predicate 35 USC 102. If the factual inquiry of ascertaining the differences between the prior art and the claims results in a finding that there are no differences between the prior art (e.g., any single reference) and the claims, then a rejection under 35 U.S.C. 102 would be proper without any necessity of a



rejection under 35 USC 103. **Thus, when ascertaining differences between the prior art and the claims, each reference is to be taken individually as under 35 USC 102.**

Further, Appellants' arguments do in fact consider the effect of combining the references. In re Sernaker, 217 USPQ 1 (Fed. Cir. 1983), states well the test for determining whether the ascertained differences between the prior art and the claims are such that the claimed subject matter as a whole would have been obvious: "whether a combination of the teachings of all or any of the references would have suggested (expressly or by implication) the possibility of achieving further improvement by combining such teachings along the line of the invention". Thus, the teachings of the prior art are to be evaluated as a combined whole, but after the differences between the prior art and the claims have been ascertained. Both In re Keller, 208 USPQ2d 871, 880-881, and In re Merck & Co., 800 F.2c 1091, 231 USPQ 375 (Fed. Cir. 1986), relied on by the Examiner, assess the combined teachings of the prior art only after the differences between the prior art and claims had been determined.

Independent Claim 15 requires and positively recites a computer, comprising: "a provision for user input", "a provision for output", "a microprocessor coupled to said user input and said output" and "an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone".

Independent Claim 30 requires and positively recites, a **portable telephone**, comprising: "an input", "an output", "a microprocessor coupled to said input and said output" and "an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in another portable telephone**, wherein said interface comprises at least one voice channel

lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another apparatus”.

Independent Claim 38 requires and positively recites, a method, comprising the steps of: “providing an input”, “providing an output”, “coupling a microprocessor to said input and said output” and “coupling an interface to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another apparatus”.

Independent Claim 43, as amended, requires and positively recites, a computer, comprising: “a provision for user input”, “a provision for output”, “a microprocessor coupled to said user input and said output” and “an interface coupled to said microprocessor, said interface being located within a cavity in said computer and **directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone”.

Independent Claim 46, as amended, requires and positively recites, a computer, comprising: “a provision for user input”, “a provision for output”, “a microprocessor coupled to said user input and said output”, “an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto**” and “a mechanism on said computer that cooperates with a corresponding mechanism on said portable telephone for removably securing said portable telephone to said computer”.

In contrast, Sainton clearly discloses in Figure 3 that the connector (112) of modem (10) in computer (104) (the interface for computer 104) is coupled via a 3FT, black round cable (114) to a corresponding connector (118) in cellular phone (116). As a result, there is NO DIRECT CONNECTION WITHOUT A CABLE OR TETHER between connector (112) of computer (110) and connector (118) of cellular phone (116), or the suggestion of any direct connection between connector (112) of computer (110) and connector (118) of cellular phone (116). Appellants' argument is confirmed by the Examiner's agreement that Sainton: "does not teach connecting the computer to the telephone without a cable or tethered connection" (Office Action dated September 29, 2005, page 4, lines 24-26); Sainton clearly discloses in figure 3 that the connector (112) of modem (10) in computer (104) is coupled via a 3FT black round cable (Office Action dated May 25, 2006, page 2, lines 17-19).

As such, Sainton fails to teach or suggest, "a microprocessor coupled to said user input and said output" and "an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone", as required by Claim 15, OR a portable telephone, comprising: "an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in another portable telephone**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another portable telephone", as required by Claim 30, OR "coupling an interface to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone**

**having a battery coupled thereto**, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another apparatus”, as required by Claim 38.

Similarly, Sainton fails to teach or suggest, “an interface coupled to said microprocessor, said interface being located within a cavity in said computer and **directly connectable without a cable or tethered connection to a corresponding interface** in a portable telephone having a battery coupled thereto, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone”, as required by Claim 43 OR “an interface coupled to said microprocessor, said interface **being directly connectable without a cable or tethered connection to a corresponding interface** in a portable telephone having a battery coupled thereto” and “a mechanism on said computer that cooperates with a corresponding mechanism on said portable telephone for removably securing said portable telephone to said computer”, as required by Claim 46.

In order to overcome Sainton's failure to teach connecting a computer to a telephone without a cable or tethered connection, the Examiner relies upon Morris PN 5,020,090 as providing such teaching. Appellants respectfully traverse this determination, as set forth below.

Morris discloses an apparatus for removably connecting a cellular portable telephone to a laptop computer which comprises a track formed in the housing of the computer and is structured to slidably receive a cellular portable telephone **whose battery pack has been removed**, via a corresponding track (46) formed on the back of

phone (38) which is exposed ONLY when the battery pack is removed (Abstract, lines 1-6; col. 1, lines 46-49; col. 3, lines 31-37; figs. 1-3). Morris specifically states:

**Cellular portable telephone 38 is shown with the battery pack (not shown) removed. Cellular portable telephone 38 slidably connects or mounts to the battery pack (not shown) in a manner similar to the way in which it connects or mounts to apparatus for removably connecting 10 incorporated into computer 22 (col. 3, lines 31-37)**

As a result, Morris' cellular portable telephone 38 does have a battery pack for use of telephone 38 when it is not connected to computer 22, but the battery must be removed in order to connect it to computer 22 since the track mechanism on the phone which is used to secure the battery pack is the SAME track that is used to secure the phone to computer 22. Examiner admits as much in his most recent response (Office Action dated May 25, 2006, page 3, lines 1-2). Being that Morris does have a battery pack, but it MUST be removed to secure and electrically connect the phone to the computer, the battery pack and the computer 22's interface are mutually exclusive connections for portable telephone 38.

Examiner does not dispute the above. Instead, Examiner, without citing any supporting prior art whatsoever, substitutes his own rationale for the combination, as set forth below:

The examiner sees no reason a battery could not be included in the telephone of Morris. It would have been obvious to maintain a battery in the telephone of Morris because this would have allowed for using the telephone separately from the computer without having the also carry a battery pack for the telephone (Office Action dated May 25, 2006, page 3, lines 4-7).

Examiner's determination above is nothing more than improper hindsight reconstruction. It is fairly straightforward that, without Examiner's hindsight determination, were one having ordinary skill in the art at the time of Appellants' invention to have combined Sainton and Morris, the resulting device would still not

obviate the present invention since the only way that a portable telephone could be coupled to the computer in a manner such that the corresponding interfaces are directly connected, is when the battery is removed from the portable telephone. Nothing in Sainton teaches interfaces and/or track mechanisms that would allow a combination device cell phone to directly couple electrically and mechanically to a portable computer.

Moreover, Appellants note that Morris' computer discloses two electrical connectors (14 & 16) that couple to corresponding connectors (48 & 50) which are exposed on the back of phone (38) when its battery pack is removed. Both of connectors (48 & 50) are covered up when the battery pack is installed on phone (38). Accordingly, when Examiner determines "It would have been obvious to maintain a battery in the telephone of Morris because this would have allowed for using the telephone separately from the computer without having the also carry a battery pack for the telephone (Office Action dated May 25, 2006, page 3, lines 4-7)", he not only overlooks the fact attachment tracks (46) would have to be mounted on the outside surface of a corresponding battery pack, but he also overlooks the additional fact that additional electrical connectors (corresponding to connectors 48 & 50) would also have to be installed on the back surface of any such battery pack. Then, there would have to be installed corresponding connectors on the inside surface of the battery pack (48' & 50') that will mate with connectors (14) and (16) on computer (22). Then, of course, one would also have to add connection means in the battery pack for coupling connectors (48 & 50) with (48' & 50'). Examiner has provided no teaching, suggestion, or motivation from the prior art that supports his determination. Examiner's determination is supposition not supported by fact.

In proceedings before the Patent and Trademark Office, "the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art". In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this

burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references", In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lahu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)). While the Examiner has provided his own rationale for a combination of Sainton and Morris and why the resulting combination could be further modified, he has provided no objective teaching in the prior or knowledge generally available to one having ordinary skill in that art that would lead that individual to combine the relevant teachings of Sainton and Morris, AND perform the further modifications suggested by Examiner, without the improper hindsight provided by Appellants' disclosure.

Further, even if, arguendo, all of the limitations of Claims 15, 30, 38, 43 and 46 were to be present when Sainton and Morris are combined, "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined ONLY if there is some suggestion or incentive to do so.**" ACS Hosp. Systems, Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

Moreover, in addition to suggesting a combination of Sainton and Morris, Examiner has proposed a "modification" to the combination of Sainton and Morris. More specifically, that one having ordinary skill in the art would (for unspecified reasons) modify the track mechanism to be outside Morris' phone 38 so that it will still somehow attach to computer 22 even with the battery pack on. If this were so obvious, why did Morris not do it? After all Morris also had a battery that had to be removed when coupling the phone to the portable computer and recoupling the battery to the phone when the phone was decoupled from the computer. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the

prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d at 902, 221 USPQ at 1127. Moreover, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985). The Examiner proposes modifications to the resulting combination of Sainton and Morris without any teaching or suggestion from the prior art.

Furthermore, "all words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. As discussed above, Examiner has failed to set forth any legitimate suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in that art, to combine Morris with Sainton AND modify the resulting combination, as suggested by Examiner. Second, there must be a reasonable expectation of success. Examiner has failed to provide any evidence that combining Morris with Sainton will result in an apparatus that would successfully implement all of the elements of Claims 15, 30, 38, 43 and 46. Finally, the prior art reference (or references when combined) must teach or suggest ALL the claim limitations (MPEP § 2143). Applicants respectfully submit that the Examiner has failed to establish all three criteria. Accordingly, Claims 15, 30, 38, 43 and 46 are patentable under 35 U.S.C. § 103(a) over Sainton in view of Morris.



Claims 17, 19, 22-23 and 28 stand allowable as depending directly, or indirectly, from allowable independent Claim 15 and including further limitations not taught or suggested by the references of record. Claims 31-37 stand allowable as depending directly, or indirectly, from allowable independent Claim 30 and including further limitations not taught or suggested by the references of record. Claims 39-42 stand allowable as depending directly, or indirectly, from allowable independent Claim 38 and including further limitations not taught or suggested by the references of record. Claim 44 stands allowable as depending directly from allowable independent Claim 43 and including a further limitation not taught or suggested by the references of record.

Claim 17 further defines the computer of Claim 15, wherein said at least one command channel lead facilitates a bidirectional half duplex mode. Claim 17 is allowable for the reasons set forth in support of the allowance of Claim 15. Moreover, Sinton and Morris, alone or in combination, fail to Claim 17's additional limitation of "wherein said at least one command channel lead facilitates a bidirectional half duplex mode".

Claim 19 further defines the computer of Claim 15, wherein voice and data are transmitted on said at least one voice channel lead. Claim 19 is allowable for the reasons set forth in support of the allowance of Claim 15. Moreover, Sinton and Morris, alone or in combination, do NOT teach or suggest that its voice channel can be used for Data & Audio. Indeed, Sinton teaches data on the DIO/DATA line and audio on the TX/TXAF and possibly RX/SPK lines.

Claim 22 further defines the computer of Claim 15, wherein said interface coupled to said microprocessor further includes a second voice channel lead. Claim 22 is allowable for the reasons set forth in support of the allowance of Claim 15. Moreover, Sinton and Morris, alone or in combination, do NOT teach or suggest Claim 22's additional limitation of "wherein said interface coupled to said microprocessor further includes a second voice channel lead".

Claim 23 further defines the computer of Claim 22, wherein each of said voice channel leads facilitates a unidirectional full duplex mode. Claim 23 is allowable for the reasons set forth in support of the allowance of Claim 22. Moreover, Sainton and Morris, alone or in combination, do NOT teach or suggest Claim 23's additional limitation of "wherein each of said voice channel leads facilitates a unidirectional full duplex mode".

Claim 28 further defines the computer of Claim 23, wherein voice and data are transmitted on said voice channel leads. Claim 28 is allowable for the reasons set forth in support of the allowance of Claim 23. Moreover, Sainton and Morris, alone or in combination, do NOT teach or suggest Claim 28's additional limitation of "wherein voice and data are transmitted on said voice channel leads".

Claim 31 further defines the apparatus of Claim 30 by further including one of a keypad and keyboard coupled to said input. Claim 31 is allowable for the reasons set forth in support of the allowance of Claim 30.

Claim 32 further defines the apparatus of Claim 30 by further including a display coupled to said output. Claim 32 is allowable for the reasons set forth in support of the allowance of Claim 30.

Claim 33 further defines the apparatus of Claim 30, wherein said apparatus is a computer. Claim 33 is allowable for the reasons set forth in support of the allowance of Claim 30.

Claim 34 further defines the apparatus of Claim 33, wherein said another apparatus is a portable telephone. Claim 34 is allowable for the reasons set forth in support of the allowance of Claim 33.

Claim 35 further defines the apparatus of Claim 30, wherein said apparatus is a portable telephone. Claim 35 is allowable for the reasons set forth in support of the allowance of Claim 30.

Claim 36 further defines the apparatus of Claim 35, wherein said another apparatus is a computer. Claim 36 is allowable for the reasons set forth in support of the allowance of Claim 35.

Claim 37 further defines the apparatus of Claim 30, wherein said portable telephone is a cellular telephone. Claim 37 is allowable for the reasons set forth in support of the allowance of Claim 30.

Claim 39 further defines the method of Claim 38, wherein said apparatus is a computer. Claim 39 is allowable for the reasons set forth in support of the allowance of Claim 38.

Claim 40 further defines the method of Claim 39, wherein said another apparatus is a portable telephone. Claim 40 is allowable for the reasons set forth in support of the allowance of Claim 39.

Claim 41 further defines the method of Claim 38, wherein said apparatus is a portable telephone. Claim 41 is allowable for the reasons set forth in support of the allowance of Claim 38.

Claim 42 further defines the method of Claim 41, wherein said another apparatus is a computer. Claim 42 is allowable for the reasons set forth in support of the allowance of Claim 41.

Claim 44 further defines the apparatus of Claim 43 wherein said portable telephone fits at least partially within said cavity when directly connected to said interface. Claim 44 is allowable for the reasons set forth in support of the allowance of Claim 43.

2) 35 U.S.C. § 103(a) rejection over Sinton in view of Morris further in view of Kyu.

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Sinton U.S. 5,249,218 in view of Morris U.S. 5,020,090 as applied to claim 15 above, and further in view of Kyu et al U.S. 4,225,919. Appellants respectfully traverse this rejection as set forth below.

Claim 16 depends from Claim 15 and is therefore allowable for the same reasons set forth above in support of the allowance of Claim 15. To the extent Claim 16 adds an additional limitation, it further defines the computer of Claim 15, wherein said at least one voice channel lead facilitates a bidirectional half duplex mode.

Even if, arguendo, Kyu et al teaches two basic types of data links are well known, including both bidirectional half-duplex and unidirectional full-duplex, as suggested by the Examiner, Kyu does not provide any teaching that overcomes the previously described deficiencies of the Sinton and Morris references. For this reason alone, Claim 16 is allowable over this combination of references. Even if such were not to be the case, the Examiner has pointed to nothing in Kyu that teaches or suggest “wherein said **at least one voice channel lead facilitates** a bidirectional half duplex mode”. As a result, the 35 U.S.C. 103(a) rejection is improper and must be withdrawn.

3) 35 U.S.C. § 103(a) rejection over Sainton in view of Morris further in view of Dent.

Claim 18 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton PN 5,249,218 in view of Morris PN 5,020,090 as applied to Claim 15 above, and further in view of Dent et al PN 5,581,597. Appellants respectfully traverse this rejection as set forth below.

Claim 18 further defines the computer of Claim 15, wherein said interface coupled to said microprocessor further includes a power lead. To the extent Claim 18 adds an additional limitation, it further defines the computer of Claim 15, wherein the interface coupled to the microprocessor further includes a power lead.

Even if, arguendo, Dent et al teaches a cellular terminal that is powered by an external signal line while the cellular terminal is parked, as suggested by the Examiner, Dent does not provide any teaching that overcomes the previously described deficiencies of the Sainton and Morris references. For this reason alone, Claim 18 is allowable over this combination of references. Even if such were not to be the case, one having ordinary skill in the art would not have been led to include a power signal “since this would have allowed for recharging the cell phone”, as suggested by the Examiner, since Morris specifically requires that the battery in portable phone 38 be removed while portable phone 38 is connected to computer 22 – thus there is no possibility of the battery being “recharged”. As a result, the 35 U.S.C. 103(a) rejection is improper and must be withdrawn.

4) 35 U.S.C. § 103(a) rejection over Sainton in view of Morris further in view of Kobayashi.

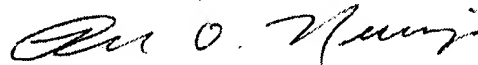
Claim 45 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton PN 5,249,218 in view of Morris PN 5,020,090 as applied to Claim 43 above, and further in view of Kobayashi PN 5,111,361. Appellants respectfully traverse this rejection as set forth below.

Claim 45 further defines the computer of Claim 43, wherein said portable telephone fits completely within said cavity when directly connected to said interface. To the extent Claim 45 adds an additional limitation, it further defines the computer of Claim 15, wherein said portable telephone fits completely within said cavity when directly connected to said interface.

Even if, *arguendo*, Kobayashi teaches a notebook computer in which the battery pack fits completely within a cavity for holding the battery pack, Kobayashi does not provide any teaching that overcomes the previously described deficiencies of the Sainton and Morris references. For this reason alone, Claim 45 is allowable over this combination of references. Further, even if such were not to be the case, one having ordinary skill in the art would not have been led to conclude that just because Kobayashi teaches a notebook computer in which the battery pack fits completely within a cavity for holding the battery pack, it would therefore be obvious to ALSO fit a separate portable telephone completely within the surface of Kobayashi's notebook computer. The Examiner's purported motivation for the combination "i.e., that it would be "aesthetically pleasing" is pure supposition not supported by fact. Being that the internal space within notebook computers is at a premium and no space is wasted, what circuitry or sub-systems in Kobayashi does the Examiner propose to remove in order to make room for an entire portable telephone? Moreover, **it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.** Accordingly, the 35 U.S.C. 103(a) rejection is improper and must be withdrawn.

For the above reasons, favorable consideration of the appeal of the Final Rejection in the above-referenced application, and its reversal, are respectfully requested.

Respectfully submitted,



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## **CLAIMS APPENDIX**

### **CLAIMS ON APPEAL:**

15. A computer, comprising:  
a provision for user input;  
a provision for output;  
a microprocessor coupled to said user input and said output; and  
an interface coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone.

16. The computer of Claim 15, wherein said at least one voice channel lead facilitates a bidirectional half duplex mode.

17. The computer of Claim 15, wherein said at least one command channel lead facilitates a bidirectional half duplex mode.

18. The computer of Claim 15, wherein said interface coupled to said microprocessor further includes a power lead.

19. The computer of Claim 15, wherein voice and data are transmitted on said at least one voice channel lead.



22. The computer of Claim 15, wherein said interface coupled to said microprocessor further includes a second voice channel lead.

23. The computer of Claim 22, wherein each of said voice channel leads facilitates a unidirectional full duplex mode.

28. The computer of Claim 23, wherein voice and data are transmitted on said voice channel leads.

30. A portable telephone, comprising:  
an input;  
an output;  
a microprocessor coupled to said input and said output; and  
an interface coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection to a corresponding interface in another portable telephone, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another portable telephone.

31. The apparatus of Claim 30 further including one of a keypad and keyboard coupled to said input.

32. The apparatus of Claim 30 further include a display coupled to said output.

33. The apparatus of Claim 30, wherein said apparatus is a computer.

34. The apparatus of Claim 33, wherein said another apparatus is a portable telephone.

35. The apparatus of Claim 30, wherein said apparatus is a portable telephone.
36. The apparatus of Claim 35, wherein said another apparatus is a computer.
37. The apparatus of Claim 30, wherein said portable telephone is a cellular telephone.
38. A method, comprising the steps of:
- providing an input;
  - providing an output;
  - coupling a microprocessor to said input and said output; and
  - coupling an interface to said microprocessor, said interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said another apparatus.
39. The method of Claim 38, wherein said apparatus is a computer.
40. The method of Claim 39, wherein said another apparatus is a portable telephone.
41. The method of Claim 38, wherein said apparatus is a portable telephone.
42. The method of Claim 41, wherein said another apparatus is a computer.

43. A computer, comprising:  
a provision for user input;  
a provision for output;  
a microprocessor coupled to said user input and said output; and  
an interface coupled to said microprocessor, said interface being located within a cavity in said computer and directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto, wherein said interface comprises at least one voice channel lead, one command channel lead and a ground/reference lead for connection to corresponding leads in a corresponding interface in said portable telephone.

44. The computer of Claim 43, wherein said portable telephone fits at least partially within said cavity when directly connected to said interface.

45. The computer of Claim 43, wherein said portable telephone fits completely within said cavity when directly connected to said interface.

46. A computer, comprising:  
a provision for user input;  
a provision for output;  
a microprocessor coupled to said user input and said output;  
an interface coupled to said microprocessor, said interface being directly connectable without a cable or tethered connection to a corresponding interface in a portable telephone having a battery coupled thereto; and  
a mechanism on said computer that cooperates with a corresponding mechanism on said portable telephone for removably securing said portable telephone to said computer.

## **RELATED PROCEEDINGS APPENDIX**

Appellants are aware of a previous appeal to the Board of Patent Appeals regarding the present application. A Decision on Appeal was rendered by the Board in Appeal No. 1999-2042 on March 8, 2002. The Decision Affirmed-in-Part and Reversed-in-Part respective ones of Examiner's rejections using references "Hop U.S. 4,912,756; Morris U.S. 5,020,090; and Dent et al. U.S. 5,581,597. Appellants are not sure what, if any, relevance the previous appeal has to the present appeal. Appellants have attached a copy of the Decision on Appeal dated March 8, 2002 for whatever relevance it may have.

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

MAILED

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

MAR - 8 2002

PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte RONALD L. SMITH,  
LAVAUGHN F. WATTS, JR., and THOMAS R. GRIMM

Appeal No. 1999-2042  
Application No. 08/568,777

77 22187

ON BRIEF

REF RECONSIDER 4/8/02  
APPEAL CAFC 5/8/02

Before SMITH, JERRY, FLEMING, and LALL, Administrative Patent Judges.

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-29, all the pending claims in the application.

The disclosed invention relates to a portable computer having an interface for direct connection to a portable telephone. In one embodiment of the invention, a portable

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BEN KROGER

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telephone (cellular in the present case) is constructed in such a fashion as to fit within a cavity in a portable computer. The portable telephone is physically connected to the portable computer by a latching mechanism and communicates with the portable computer by means of a computer/portable telephone interface. Physically and electrically connecting the portable telephone to the portable computer eliminates the need for a cable or tethered connection between a portable computer and a portable telephone. Several other embodiments of the invention are disclosed. A further understanding of the invention can be obtained by the following claim.

1. A computer, comprising:
  - a provision for user input;
  - a provision for output;
  - a microprocessor coupled to said user input and said output;and
  - an interface coupled to said microprocessor, said interface being directly connectable to a corresponding interface in a portable telephone

The examiner relies on the following references:

Hop	4,912,756	Mar. 27, 1990
Morris	5,020,090	May 28, 1991
Dent et al. (Dent)	5,581,597	Dec. 3, 1996
		(filed May 19, 1995)

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Claims 1-7, 13, 15-17, and 19-29 stand rejected under 35 U.S.C. § 102 as being anticipated by Hop.

Claims 8-11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hop.

Claim 18 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hop in view of Dent.

Claims 12 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hop in view of Morris.

Rather than repeat the arguments of appellants and the examiner, we make reference to the briefs<sup>1</sup> and the answer for the respective details thereof.

#### OPINION

We have considered the rejections advanced by the examiner and the supporting arguments. We have, likewise, reviewed the appellants' arguments set forth in the briefs.

We affirm-in-part.

#### Rejections under 35 U.S.C. § 102

In the response to the rejection of claims 1-7, 13, 15-17, and 19-29 (answer at pages 3 and 4), appellants submit arguments

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<sup>1</sup> A reply brief was filed as Paper No. 13 on March 8, 1999, and its entry was noted by the examiner on March 29, 2000, see Paper No. 15, without any further response.

in regard to each claim separately. With respect to claims 1 and 29, after discussing the Hop reference (brief at pages 6-8), appellants conclude, id. at 8, that:

Thus, interface circuit 3 is not a part of CSE 4, not a part of cellular connector 28, not a part of handset 27, and not an integrated part of any "portable telephone" . . . . As a result, Hop fails to teach or suggest a computer having an interface that is "DIRECTLY connectable to a corresponding interface in a portable telephone", as required by Appellants' Claims 1 and 29.

The examiner responds, answer at pages 8 and 9, that "[t]his is correct yet these four devices are connected together to form a computer system. The examiner noted that there is nothing in the claim language requiring the four device to be physically one device." We agree with the examiner's position. Looking at Figure 2 of Hop, we find that the interface 3 and 28 is indeed directly connected to the portable computer PC1 via line 22. Even though line 29 and line 23, which also connect the interface to the computer PC1, do not directly connect the interface to the computer because of the presence of modem 24 in the two lines, the language of the claim does not preclude a partial indirect connection of the interface to the computer. We also note that, as observed by the examiner, claim language does not require interface being an integral part of the computer and physically



connected to the computer. Therefore, we sustain the anticipation rejection of claims 1 and 29 by Hop.

With respect to claims 2-7, appellants make the same argument for each claim. Additionally, appellants argue, with respect to claim 2, for example, brief at page 8, that "the Examiner argues that this feature is inherent in Hop's disclosure but fails to identify the location of the teaching for such inherency. As a result, the Hop reference fails to teach or suggest this further limitation in combination with the requirements of Claim 1." We note that:

To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by person of ordinary skill." *In re Robertson*, Slip Op 98-1270 (Fed. Cir. February 25 1999) *citing Continental Can Co v. Monsanto Co.*, 948 F.3d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result for a given set of circumstances is not sufficient." *Id.* *citing Continental Can Co v. Monsanto Co.*, 948 F.3d 1264, 1269, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991).

Here, the examiner has asserted that the claimed feature in claim 2, i.e., a keyboard, is inherent to a computer. We agree with the examiner that since an input means is inherent to a computer and a keyboard is a common input means, an artisan would recognize that Hop's computer necessarily possesses a keyboard.

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Therefore, the burden shifts to appellants to disprove the examiner's assertion of inherency. While appellants have made a statement to oppose this assertion by the examiner, appellants have not shown why the computer PC1 in Hop would not possess a keyboard to provide an input to PC1. The same rationale applies to claims 3-7. Therefore, we also sustain the anticipation rejection of claims 2-7 by Hop.

With respect to claim 13, appellants simply state the limitations and the teachings of the Hop reference at pages 9 and 10 of the brief. However, appellants do not explain specifically why the teachings of Hop do not meet the limitations of claim 13 as asserted by the examiner on page 3 of the examiner's answer. 37 CFR § 1.192(c)(8)(iii). Therefore, we sustain the anticipation rejection of claim 13 by Hop.

With respect to claim 15 (brief at page 10), appellants argue that "[b]idirectional serial bus 22 fails to teach both 'at least one voice channel lead' and 'one command channel lead'." In the examiner's rejection of claim 15 (answer at page 4, and response to appellants' arguments in the answer at pages 9 and 10), the examiner contends that since port 20 as well as port 21 in Hop's PC1 are identified as RS232 connectors, the connecting line 22 must have the capability of a RS232 cable. The examiner

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also points to a cable layout in Figure 3 of Hop to support this point of view. However, we find that the examiner's reliance on RS232 cable between the interface 3 and the portable computer 2 is misplaced. We, instead, agree with the appellants' position that the connecting line 22 in Figure 2 of Hop does not indeed have the claimed "at least one voice channel lead" and "one command channel lead." Since claims 16, 17, and 19-28 depend on claim 15, they also are not met by the Hop reference as contended by the examiner. Therefore, we do not sustain the anticipation rejection of claims 15-17 and 19-28 by Hop.

Rejections under 35 U.S.C. § 103

In response to the obviousness rejection of claims 8-11 (answer at pages 4 and 5), appellants argue, pages 14 and 15 of the brief, that "[t]he Examiner has . . . failed to provide evidence to show that an ordinary artisan would have been motivated to modify interface COM1 or COM2 in Hop to be in a cavity within portable computer 2 without the improper hindsight provided by Appellants' disclosure." With respect to each of these claims, the claimed feature requires that said interface is located within a cavity in said computer either partially or completely. We agree with appellants that the examiner has provided no evidence or a line of reasoning to modify Hop to have

the claimed cavity which will accommodate the interface either partially or completely. Therefore, we do not sustain the obviousness rejection of claims 8-11 over Hop.

With respect to claim 18, since it depends on claim 15, and the additional reference Dent used by the examiner, does not cure the deficiency noted above in regard to claim 15, we do not sustain the obviousness rejection of claim 18 over Hop and Dent.

With respect to claim 12, appellants argue that the combination of Morris and Hop does not meet the claimed limitations, brief at pages 17 and 18 and reply brief at pages 13 and 14. However, we find that, according to claim 1, a computer is defined to contain all the elements shown in Figure 2 of Hop including user input, output, microprocessor, and an interface coupled to cellular connector, said interface being directly connectable to a corresponding interface in a portable telephone. Furthermore, modem 24 is clearly within said computer and is coupled to the microprocessor. Therefore, Hop alone shows modem being within said computer in Figure 2 of Hop. Morris, even though it shows a modem within the body of the computer in Figure 8 and column 5, lines 1-3, is merely cumulative to the disclosure of Hop to meet the claimed limitations of claim 12. With respect to claim 14, Figure 2 of Hop clearly transmits and receives voice

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and data signals while the computer and the portable telephone are connected together, as explained with respect to claim 1 above. Therefore, we sustain the obviousness rejection of claim 12 and its dependent claim 14 over Hop and Morris.

In conclusion, we have sustained the anticipation rejection of claims 1-7, 13 and 29 by Hop; we have sustained the obviousness rejection of claims 12 and 14 over Hop and Morris; we have not sustained the anticipation rejection of claims 15-17 and 19-28 by Hop; we have not sustained the obviousness rejection of claims 8-11 over Hop; and we have not sustained the obviousness rejection of claim 18 over Hop and Dent.

The decision of the examiner rejecting claims 1-29 is affirmed-in-part.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

*Jerry Smith*  
Jerry Smith

Jerry Smith  
Administrative Patent Judge

Michael R. Fleming

Michael R. Fleming  
Administrative Patent Judge

Parslotom Skull

Parshotam S. Lall  
Administrative Patent Judge

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